Prognostic utility of H2FPEF score in heart failure with preserved ejection fraction

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H2FPEF (obesity, atrial fibrillation, age >60 yrs, ≥2 antihypertensives, E/e’ >9, and pulmonary artery systolic pressure by echo >35 mmHg) is a newly-developed score used for establishing the likelihood of heart failure with preserved ejection fraction (HFpEF). Given the clinical significance of its components, it is tempting to speculate that this algorithm might be useful for cardiovascular (CV) risk prediction.

Aim: To investigate the prognostic value of H2FPEF score in a well-characterized HFpEF population.

Methods and Results: A group of 205 patients (64±8yrs) with symptomatic HFpEF, underwent clinical and echocardiographic evaluation. At a mean follow-up of 26.2 months, 64 patients (31%) experienced the composite of CV hospitalization or death, and 51 (25%) HF hospitalization. Cox regression analysis revealed that H2FPEF was significantly associated with both study endpoints (HR: 1.30; 95% CI: 1.10 to 1.54; p=0.002 for CV hospitalization or death, and 1.45; 95% CI: 1.21 to 1.75; p<0.001 for HF hospitalization). The prognostic value of H2FPEF was non-inferior to a traditional prognosticator in HF - MAGGIC (Meta-analysis Global Group in Chronic Heart Failure) risk score (area under ROC curve 0.62 for H2FPEF and 0.65 for MAGGIC, p=0.58, for the composite end-point, and 0.66 for both predictors, p=0.96, for HF hospitalization). Using an externally-derived cutpoint for H2FPEF of 5 (considered as the upper limit of the range corresponding to an intermediate probability of HFpEF), we demonstrated that the subset with the score equal to or above this threshold was characterized by a higher risk of both study end-points (Figure).

Conclusions: H2FPEF score, originally dedicated to discrimination of HFpEF, is a potent prognosticator in this condition, with the ability to identify increased clinical risk comparable to MAGGIC score.

Figure. Kaplan-Meier estimates of survival free of the study outcomes according to H2FPEF score

![Kaplan-Meier estimates of survival free of the study outcomes according to H2FPEF score](image-url)